



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/064,481	07/18/2002	Frank Xiao-Dong Wang	AM-1	9688
23933	7590	05/04/2005	EXAMINER	
STUART T AUVINEN 429 26TH AVENUE SANTA CRUZ, CA 95062-5319			HAMZA, FARUK	
			ART UNIT	PAPER NUMBER
			2155	

DATE MAILED: 05/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/064,481

Applicant(s)

WANG, FRANK XIAO-DONG

Examiner

Faruk Hamza

Art Unit

2155

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 18 July 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_\_ is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 10-20 are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 July 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

1. This action is responsive to the application filed on July 18, 2002. Claims 1-20 are now pending.

### ***Election/Restrictions***

2. Restriction to one of the following inventions is required under 35 U.S.C. 121:
  - I. Claims 1-9 are drawn to computer to computer session/connection establishing, classified in class 709, subclass 227.
  - II. Claims 10-20 are drawn to Error detection/correction and fault detection/recovery, classified in class 714, subclass 4.
3. The inventions are distinct, each from the other because of the following reasons:

Inventions group I and group II are related as combination and subcombinations. Inventions in this relationship are distinct if it can be shown that (1) the combination as claimed does not require the particulars of the subcombination as claimed for patentability, and (2) that the subcombination has

utility by itself or in other combinations (MPEP § 806.05(c)). In the instant case, the combination as claimed does not require the particulars of the subcombination as claimed because it distinctly relates TCP connection. The subcombination has separate utility such as error detect.

4. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

5. During a telephone conversation with Mr. Stuart Auvinen on April 08, 2005 a provisional election was made with traverse to prosecute the invention of group I, claims 1-9. Affirmation of this election must be made by applicant in replying to this Office action. Claims 10-20 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

### ***Specification***

6. **Content of Specification**

- (g) Brief Summary of the Invention: See MPEP § 608.01(d). A brief summary or general statement of the invention as set forth in 37 CFR 1.73. The summary is separate and distinct from the abstract and is directed toward the invention rather than the disclosure as a whole. The summary may

Art Unit: 2155

point out the advantages of the invention or how it solves problems previously existent in the prior art (and preferably indicated in the Background of the Invention). In chemical cases it should point out in general terms the utility of the invention. If possible, the nature and gist of the invention or the inventive concept should be set forth. Objects of the invention should be treated briefly and only to the extent that they contribute to an understanding of the invention.

***Claim Rejections - 35 USC § 112***

7. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

8. Claim 1 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Applicant failed to describe what is "collective TCP pipeline" and how to generate it.

Claims 2-9 have the same deficiency of their base claim.

9. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Art Unit: 2155

10. Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

11. Regarding claim 1, the term "collective TCP pipeline" in claim 1 renders the claim indefinite. The term "collective TCP pipeline" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

Claims 2-9 have the same deficiency of their base claim.

***Claim Rejections - 35 USC § 102***

12. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before

November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

13. Claim 1,5,6 and 9 are rejected under 35 U.S.C. 102(e) as being anticipated by Rossmann et al. (U.S. Patent Number 6,526,439) hereinafter referred as Rossmann.

14. Rossmann has disclosed:

- <Claim 1>

- A wireless Internet accelerator comprising:

- a client program running on a mobile device; (Fig. 3, 168)

- a client agent running on the mobile device, the client agent coupled to the client program by multiple concurrent Transport-Control-Protocol (TCP) connections; (Fig. 3, Fig. 4B)

- a server proxy not on the mobile device, coupled to the client agent on the mobile device by a radio link, and coupled to Internet servers by an Internet connection; and (Fig. 1, 114)

- a collective TCP pipeline, using the radio link to exchange packets between the client agent and the server proxy, for exchanging packets from the multiple concurrent TCP connections from the client program using a collective

connection that is a single TCP connection between the client agent and the server proxy, (Column 10, lines 65-67; Column 11, lines 1-17)

whereby multiple concurrent TCP connections from the client program are combined by the client agent for transmission over the radio link using the collective connection. (Column 10, lines 65-67; Column 11, lines 1-17).

- <Claim 5>

The wireless Internet accelerator of claim 1 wherein the collective connection over the radio link is a persistent connection that persists for a longer period of time than each of the multiple concurrent TCP connections. (Column 12, lines 21-23)

- <Claim 6>

The wireless Internet accelerator of claim 5 wherein the client program is a web browser and the multiple concurrent TCP connections comprise four TCP connections that are open concurrently. (Fig. 4B)

- <Claim 9>

The wireless Internet accelerator of claim 1 wherein the mobile device is a web-enabled cell phone or a personal digital assistant (PDA) or a mobile Internet device. (Fig. 1, 106).



***Claim Rejections - 35 USC § 103***

15. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

16. Claims 7 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rossmann et al. (U.S. Patent Number 6,526,439) as applied above, hereinafter referred as Rossmann , and in view of Smith et al. (U.S. Patent Number 6,871,215) hereinafter referred as Smith.

17. With respect to claim 7,

Rossmann teaches wireless and landline data network where mobile device is connected through a proxy server (Rossmann, Fig. 1). Rossmann doesn't explicitly teach mobile device running email client or agent.

However, Watanabe in an analogous art teaches mobile device running email service. (Smith, Fig. 3A).

- <Claim 7>

The wireless Internet accelerator of claim 1 further comprising:  
an email client running on the mobile device; (Smith, Fig. 3A).

an email agent, the email agent coupled to the email client by multiple sequential requests for email messages; (Smith, Fig. 4).

an email proxy not on the mobile device, coupled to the email agent on the mobile device by the radio link, and coupled to email servers by an Internet connection; and (Smith, Fig. 4, 410;400)

a collective email pipeline, using the radio link to exchange email messages between the email agent and the email proxy, for exchanging email messages from the multiple sequential requests from the email client using a collective email connection that transfers multiple email messages in parallel between the email agent and the email proxy, whereby email messages are combined for transmission over the radio link. (Smith, Fig. 4).

18. Since the inventions disclosed in Rossmann and Smith encompass the same field of endeavor, it would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to modify the system of Rossmann by adding email service that allows a user to access email with greater ease. Incorporate of the email service in Rossmann would make the system versatile. (Smith, Column 1, lines 35-37).

19. As to claim 8, the rationale given above is applied. In addition Smith teaches:

- <Claim 8>

The wireless Internet accelerator of claim 7 wherein multiple email messages are transmitted from the email proxy to the email agent over the radio link during a single round-trip-time. (Fig. 4).

20. Claims 2-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rossmann et al. (U.S. Patent Number 6,526,439) as applied above, hereinafter referred as Rossmann , and in view of Molloy et al. (U.S. Patent Number 6,591,382) hereinafter referred as Molloy.

21. With respect to claim 2,

Rossmann teaches, TCP connections (Fig. 1). Rossmann explicitly doesn't teach error detection and correction.

However, Molloy in an analogous art teaches TCP/IP error detection and correction. (Molloy, Column 2, lines 58-67).

- <Claim 2>

The wireless Internet accelerator of claim 1 further comprising: a collective TCP controller, receiving packet loss statistics from a plurality of server proxies, for generating TCP parameters that are sent to the plurality of server proxies to adjust TCP parameters for the collective TCP pipeline, whereby packet loss

statistics for many connections are collected and TCP parameters set for radio links. (Molloy, Column 13, lines 8-31).

22. As to claim 2, it would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to modify the system of Rossmann by adding TCP/IP error detection and correction that allows a user to have a robust system. Incorporate of the error detection and correction in Rossmann would make the system versatile. (Molloy, Column 2, lines 51-55).

23. As to claim 3 and 4 the rationale given above is applied in addition Molloy teaches:

- <Claim 3>

The wireless Internet accelerator of claim 2 wherein the collective TCP controller aggregates the packet loss statistics for several connections to different Internet servers by the mobile device; (Molloy, Column 13, lines 8-14)

the collective TCP controller adjusting the TCP parameters based on aggregate packet loss statistics for connections by the mobile device to different Internet servers, whereby TCP parameters are set based on collective packet loss statistics. (Molloy, Column 13, lines 14-31).

- <Claim 4>

The wireless Internet accelerator of claim 3 wherein the collective TCP controller further comprises:

a threshold comparator, for comparing a threshold to an aggregate packet loss collected from the several connections to different Internet servers by the mobile device; and (Molloy, Column 13, lines 14-15)

a parameter calculator, coupled to the threshold comparator, for adjusting the TCP parameters to reduce congestion losses at an Internet router when the aggregate packet loss exceeds the threshold, but for adjusting the TCP parameters to reduce radio losses on the radio link when the aggregate packet loss is below the threshold, (Molloy, Column 13, lines 14-31)

whereby the TCP parameters are adjusted to compensate for radio losses when the aggregate packet loss is below the threshold, but to compensate for router congestion losses when the aggregate packet loss is above the threshold. (Molloy, Fig. 4).

### ***Conclusion***

24. The prior art made of record and not relied upon is considered pertinent to the applicant's disclosure.

- Kumaki et al. (U.S. Patent Number 6,473,411) disclosed datagram transfer method and communication system for mobile terminals.

Art Unit: 2155

- Li et al. (U.S. Patent Number 6,757,248) disclosed performance enhancement of transmission control protocol (TCP) for wireless network applications.
- Baker et al. (U.S. Patent Number 6,430,599) disclosed Just-in-time services for small footprint devices.
- Iida (U.S. Pub. No. US 2002/0032739) disclosed method for transmitting/receiving text data in portable terminal.
- Watanabe et al. (U.S. Pub No. US 2001/0034774) disclosed document transmission apparatus and cellular phone apparatus.

25. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Faruk Hamza whose telephone number is 571-272-7969. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hosain Alam can be reached at 571-272-3978. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you

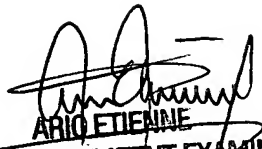
Art Unit: 2155

have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 886-217-9197 (toll -free).

Faruk Hamza

Patent Examiner

Group Art Unite 2155

  
ARIQ ETIENNE  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2100